

WO 2005/072475

PCT/US2005/003560

EX05-004patentin.txt
SEQUENCE LISTING

<110> EXELIXIS, INC.
<120> ITPKS AS SMODIFIERS OF THE IGFR PATHWAY AND METHODS OF USE
<130> EX05-004C-PC
<150> US60/539,837
<151> 2004-01-28
<160> 10
<170> PatentIn version 3.2
<210> 1
<211> 1782
<212> DNA
<213> Homo sapiens
<400> 1
gaattccgga aatgaccctg cccggggggcc caacgggcat ggcgcggccg gggggcgcgga 60
ggccctgcag cccggggctg gagcggggccc cgcgccggag tgtcggggag ctgcgcctgc 120
tcttcgaggc gcgctgtgcg gcggtcgctg cggccgccgc cgcgggggag ccccgggccc 180
gcggggccaa gcggcgtggg ggacaggtcc ccaacgggct tccgcgggct ccccgggccc 240
cggatgaccc tcagctgacc gtgacagccg aggagcccga cgtgcccccg accagccctg 300
ggccgccgga gcgggagagg gactgcctcc cggcagcggg ctcttcgcac ctgcagcagc 360
cgcgccgcct ttccacctcg tcggtctcct cacttggtc ctcgtcgctg ctcgaggact 420
cggaggacga cctgctgagc gacagtgaga gccggagccg cggcaacgtg cagctggaag 480
cgggcgagga cgtgggtcag aaaaaccact ggcagaagat cgggaccatg gtcaatctgc 540
cggtcataag ccctttcaag aagcgctacg cctgggtgca gctggcaggg cacactggga 600
gttttaaggc ggcgggcacc agcgggctga tcctgaagcg ctgctcggag ccggagcgct 660
actgcctggc gcggctgatg gctgacgcgc tgcgcggctg cgtgcctgcc ttccacggcg 720
tggtggagcg cgacggcgaa agctacctgc agctgcagga cctgctcgat ggcttcgacg 780
gaccttgtgt gctcgactgc aaaatgggcg tcaggactta cctagaggag gagctgacca 840
aggcccgtga gcggcccaag ctgcggaagg acatgtacaa gaaaatgctg gcggtggatc 900
ctgaagctcc cacggaggag gagcacgcgc agcgcgccgt caccaagccg cgctacatgc 960
agtggcggga aggcatcagc tccagcacca ccctcggctt ccgcatcgag ggcatacaaga 1020
aagcggacgg ctcttcgagc accgacttca agactacgcg aagccgagag cagggtgcttc 1080
gcgtctttga agagtttgtg caaggagatg aggaagtgct gaggcgggtat ctgaaccgcc 1140
tgcagcagat ccgggacacc ctggaggtat ccgagttctt caggaggcac gaggtgatcg 1200
gcagctcgct cctctttgtg cacgatcact gccatcgcgc cggcgtgtgg ctcatcgact 1260
tcggcaagac cacgcccctc cccgatggcc agatcctgga ccaccggcgg ccctgggagg 1320
agggcaaccg cgaggacggc tatttgctgg ggctggacaa tctcattggc atcctggcca 1380
gcctggctga gagatgaggc tggactcctg tccccgcggg ccgctcacct gacatgtgga 1440

EX05-004patentin.txt

cctgcagctt tgtccccact gtgcatgccg gcttgagact ggagccccgc ggtgcagggc 1500
 agttcaccgg gtcctgcagg accaggtgcc agccactaag ggggggcacc gccgatgcca 1560
 ggggttttgc ccaccggggc cccagcggtc ccagagccaa atgacactaa cttatagaag 1620
 gggagggggc aaagggcttc ttcctcaggc cagctcttct gaggaggctc tggcctctcc 1680
 agaggtgcca gaccgcggat tttatttagc aagcccagac cttccggtct aacgtctcac 1740
 accacgacgg actccccctc ctaataaaac tcaaagacaa aa 1782

<210> 2
 <211> 1837
 <212> DNA
 <213> Homo sapiens

<400> 2
 ggtctccggc gcgccgcggg ctggtgggct cagcggcggc gccggcactg ggaaatgacc 60
 ctgcccgggg gcccaacggg catggcgcgg ccggggggcg cgaggccctg cagcccgggg 120
 ctggagcggg cccgcgcgag gagtgtcggg gagctgcgcc tgctcttcga ggcgcgctgt 180
 gcggcggtcg ctgcggccgc cgccgcgggg gagccccggg cccgcggggc caagcggcgt 240
 gggggacagg tccccaacgg gcttcagcgg gctcccccg ccccggtgat ccctcagctg 300
 accgtgacag ccgaggagcc cgacgtgccc ccgaccagcc ctgggccgcc ggagcgggag 360
 agggactgcc tcccggcagc gggctcttcg cacctgcagc agccgcgccg cctttccacc 420
 tcgtcgggtc cctccactgg ctccctcgtc ctgctcgagg actcggagga cgacctgctg 480
 agcgacagtg agagccggag ccgcggcaac gtgcagctgg aagcgggcga ggacgtgggt 540
 cagaaaaacc actggcagaa gatccggacc atggtcaatc tgccggtcat aagccctttc 600
 aagaagcgct acgcctgggt gcagctggca gggcacactg ggagttttta ggcggcgggc 660
 accagcgggc tgatcctgaa gcgctgctcg gagccggagc gctactgcct ggcgcggctg 720
 atggctgacg cgctgcgcgg ctgcgtgcct gccttccacg gcgtgggtgga gcgcgacggc 780
 gaaagctacc tgcagctgca ggacctgctc gatggcttcg acggaccttg tgtgctcgac 840
 tgcaaaatgg gcgtcaggac ttacctagag gaggagctga ccaaggcccc tgagcggccc 900
 aagctgcgga aggacatgta caagaaaatg ctggcggtgg atcctgaagc tcccacggag 960
 gaggagcacg cgcagcgcgc cgtcaccaag ccgcgctaca tgagtggcg ggaaggcatc 1020
 agctccagca ccaccctcgg cttccgcacg gagggcatca agaaagcggg cggctcctgc 1080
 agcaccgact tcaagactac gcgaagccga gagcaggtgc ttcgcgtctt tgaagagttt 1140
 gtgcaaggag atgaggaagt gctgaggcgg tatctgaacc gcctgcagca gatccgggac 1200
 accctggagg tatccgagtt cttcaggagg cacgaggtga tcggcagctc gctcctcttt 1260
 gtgcacgatc actgccatcg cgccggcggtg tggctcatcg acttcggcaa gaccacgccc 1320
 ctccccgatg gccagatcct ggaccaccgg cggccctggg aggagggcaa ccgcgaggac 1380
 ggctatttgc tggggctgga caatctcatt ggcacctcgg ccagcctggc tgagagatga 1440

EX05-004patentin.txt

```

ggctggactc ctgtccccgc gggccgctca cctgacatgt ggacctgcag ctttgtcccc 1500
actgtgcatg ccggcttgag actggagccc cgcggtgcag ggcagttcac cgggtcctgc 1560
aggaccaggt gccagccact aagggggggc accgccgatg ccaggggttt tgcccacccg 1620
ggccccagcg ttcccagagc caaatgacac taacttatag aaggggaggg ggcaaagggc 1680
ttcttctca ggccagctct tctgaggagg ctctgccctc tccagagggtg ccagaccgcg 1740
gattttatatt agcaagccca gaccttccgg tctaactgtc cacaccacga cggactcccc 1800
ttcctaataa aactcaaaga caaaaaaaaa aaaaaaa 1837

```

```

<210> 3
<211> 5875
<212> DNA
<213> Homo sapiens

```

```

<400> 3
ggagccgcgg cggcgggcag cgcgggaccc agtactatgg ctgtgtactg ctatgcgctc 60
aatagcctgg tgatcatgaa tagcgccaac gagatgaaga gcggcggcgg cccggggccc 120
agtggcagcg agacgcccc gccccgagg agggcagtg tgagccccgg cagcgtttct 180
agccccggga gaggcgcctc tttctcttc ccccagccg agtcgctgtc ccccgaggag 240
ccccggagcc ccgggggctg gcggagcggc cggcgagggc tgaatagtag cagcggcagt 300
ggcagcggca gcagcggcag tagcgtgagc agcccaagtt gggctggctg cctgcgaggg 360
gaccggcagc aggtggtggc agccggtacc ctctccccgc cagggccgga ggaggccaag 420
aggaagctgc ggatcttgca gcgcgagttg cagaactgtc aggtgaacca gaaagtgggc 480
atgtttgagg cgcacatcca ggcacagagc tccgccattc aagcgccccg cagccccgct 540
ttgggcaggg ctgcctcgcc ctccccgtgc cccttccgca gcagcagtca gccccctgga 600
agggctctgg ttcagggcgc ccggagcag gaacggagga caaagtcctg gggggagcaa 660
tgtccagaga cttcaggaac cgactccggg aggaaaggag ggcccagcct atgctcctcg 720
caggtgaaga aaggaatgcc acctcttccc ggccgggctg cccctacagg atcagaggct 780
caggggccat ccgcttttgt aaggatggag aagggtatcc ctgccagtcc ccgctgtggc 840
tcaccacag ctatggaaat tgacaaaagg ggctctccta cccgggaac tcggagctgc 900
ctagctccct cattggggct gttcggagct agcttaacga tggccacgga agtggcagcg 960
agagttacat cactggggc acaccgtcca caggatcttg ccctactga gccgtctggg 1020
agagcccgtg agcttgagga cctgcagccc ccagaggccc tggaggagag gcaggggcag 1080
tttctgggca gtgagacaag cccagcccca gaaagggcg ggccccgca tggagaaccc 1140
cctgggaaga tggggaaagg atatctgccc tgtggcatgc cgggctctgg ggagcctgaa 1200
gtgggcaaaa ggccagagga gacgactgtg agcgtgcaaa gcgcagagtc ctctgattcc 1260
ctgagctggt ccaggtgcc cagggccctg gcctccgtag gccctgagga ggcccgaagt 1320
ggggcccccg tgggcggggg gcgttggcag ctctccgaca gaggggagg agggccccca 1380
acgctgggct tgcttggggg cagccccca gcacagccgg ggaccgggaa tgtggaggcg 1440

```

EX05-004patentin.txt

ggaattcctt ctggcagaat gctggagcct ttgccctgtt gggacgctgc gaaagatctg 1500
aaagaacctc agtgccctcc tggggacagg gtgggtgtgc agcctgggaa ctccagggtt 1560
tggcagggca ccatggagaa agccggtttg gcttggacgc gtggcacagg ggtgcaatca 1620
gaggggactt gggaaagcca gcggcaggac agtgatgccc tcccaagtcc ggagctgcta 1680
ccccaagatc aggacaagcc tttcctgagg aaggcctgca gccccagcaa catacctgct 1740
gtcatcatta cagacatggg caccacaggag gatggggcct tggaggagac gcagggaagc 1800
cctcggggca acctgcccct gaggaaactg tcctcttcct cggcctcctc cacgggcttc 1860
tcctcatcct acgaagactc agaggaggac atctccagtg accctgagcg caccctggac 1920
cccaactcag ctttctgca taccctggac cagcagaaac ctagagttag caaatcatgg 1980
aggaagataa aaaacatggt gcaactggtc cccttcgtca tgtccttcaa gaagaagtac 2040
ccctggatcc agctggcagg acacgcaggg agtttcaagg cagctgcaa tggcaggatc 2100
ctgaagaagc actgtgagtc agagcagcg tgcctggacc ggctgatggg ggatgtgctg 2160
aggcccttcg tacctgccta ccatggggat gtggtgaagg acggggagcg ctacaaccag 2220
atggacgacc tgctggccga cttcgactcg ccctgtgtga tggactgcaa gatgggaatc 2280
aggacctacc tggaggagga gctcacgaag gcccgaaga agcccagcct gcggaaggac 2340
atgtaccaga agatgatcga ggtggacccc gagggcccca ccgaggagga aaaagcacag 2400
cgggctgtga ccaagccacg gtacatgcag tggcgggaga ccatcagctc cacggccacc 2460
ctggggttca ggatcgaggg aatcaagaaa gaagacggca ccgtgaaccg ggacttcaag 2520
aagacaaaa cgaggagca ggtcaccgag gccttcagag agttcactaa aggaaaccat 2580
aacatcctga tcgcctatcg ggaccggctg aaggccattc gaaccactct agaagtttct 2640
cccttcttca agtgccacga ggtcattggc agctccctcc tcttcatcca cgacaagaag 2700
gaacaggcca aagtgtggat gatcgacttt gggaaaacca cgccctgcc tgagggccag 2760
acctgcagc atgacgtccc ctggcaggag gggaaaccgg aggatggcta cctctcgggg 2820
ctcaataacc tcgtcgacat cctgaccgag atgtcccagg atgcccact cgcctgagct 2880
gcccacgccc tccctggccc ccgcctgggc ctctttcct cctcctgtgc ttcctttctc 2940
gttcctaact tttccttcac ttacacctga ctgaccctcc tgaactgcac tacaagacac 3000
ttttagaag aggagatgag agtttctagt cattttccta acttcagggc ttggagggtg 3060
tgtttgact gctttttgta gagagggtca cctactagaa gagaaatgcc cagtcttaga 3120
ggtgggtcag gtgtagagct ggagggggtc cctggctgct gaggggaccc taccagatga 3180
gccctgcctc tgggagcccc ctaggaagca ccagcctgga cctaccacct gcggaggcct 3240
gctgccccct ggcgccagc gctgttagag tgctgccaa cacagcctta tttctgccgg 3300
ggcctcccca ccggagagcc cagggggccg gccgggttcc tggccctgg ctgggagcag 3360
ggctttctgg tagttggggc aaaaaaccat cggggaacca catgttgact gtgagcaaag 3420
tgtcttcga ttagcagcct cagggatgcc ctgggtggcct ctccagggct gctcaggcaa 3480

EX05-004patentin.txt

ggccccccac ccatctggta tggaaacctg ccggctccag gccagaccca ggagccaaga 3540
gaaggctgaa gccagcttgg ctgtgttctc tgatctaggc cttcccagag gaggcgagca 3600
gaagctgtgc cacttggaat tgcaacccat gagttcagaa ggcacactct gccatgtga 3660
gctccaaggg tgctaccagg ggaagatggg atctatagag tctctgggcc ctggccccag 3720
ggaggagcac atttttcttg accctcacct acctgggtgt agttgggtcaa ccctgcctgc 3780
atacatgggc tcctgtcatg gggcccagag tcccttgca atataaaaat aggggaggag 3840
ctcaggctctg cgccaggcag gaagaaggca ggcttctggc ttccagaggt gccgcggtgg 3900
cctcctggca tcatttgta ttgcctctga aacaagcctt actgcctgga gggcttagat 3960
tcctgcttct ccaatgtagt gtgggtatct ttaggggtat gtgggtggatg ccagggcggtg 4020
ctccaggcac ctcttctga agtctctgca tttggagatt cgtggagaac ctatttaagc 4080
ccaattttaa ctgaaagcca gtgagtctga tatggaagg aatgtaaaat ttgcctgact 4140
tcttaagaac aaaaccccc gctctgtgcc ccatgctcct tggggcttgc caccactcc 4200
tttgctgtca gagggtacagg agctgggaga gtccaggagc tagggacaca gagggagact 4260
atggaccaag gtgtgtgtgt ctggaggaac cactgccac cccaccaccc cggggtctct 4320
ggggaactgt caacctgccc acgggacatg tacatttccc cttttgtgct ggaagtgtga 4380
gtgacacttg ctgggggtgg aggggtgggac acatgaggat gtataagtac agattttaaa 4440
aaaggaaatc aacttacact tcctggctct tgtttaaaac agtggtgagc tcctgtgtgg 4500
gccgacttgc taaaggtcac acacgcgccc ggtggagcac gagagacctc gtggcagcat 4560
gtgatctgga aggcaggcag gacgggggagc ttggggagcc aaagtcaact ctgggcctct 4620
ggagctatag tgacttttgg gctagaaggg accctgggtg tctgtgcttc agccatttgc 4680
agggcagggg catcattaat tcagacgtaa agattctatg aatatggact ggccaaaagt 4740
tattccttact ccatctgtga aagaagttt cttaaagcaa tcatgatag aacaaaaatt 4800
acaggggacc tgtttaagag aacaaaatgt tccaagcact ttaggcagac accagctgtt 4860
tgcaacaat gtgctaatat gcaaatgatg tgctatttaa aggaggccca tggggcctct 4920
tattggcaat acttggctgt gggttacatt aaatatgtga acatagtatg aagtagcatc 4980
attttagggg tattctgtta cttaggggtt ttgtttctg tttttttttt ctcttttttt 5040
gtatttaccg tgctagttct cttctacacc tactctgtct ctcaagccat ttgcccactc 5100
gcttcctgc catctggccc ttccctttgt ctcatggga tagatggatt gtgaaatgga 5160
atctcccaga acccctgccc tggcagcctg gaagaccgtg cctgcccagc cctcgtcacc 5220
acagggactc cttgggtcct ggcagtgcag gtgccagcag gcaggacaaa ctctgtgtac 5280
ctgtgcccag gtgaatgggc gcagggtcct cttgccctgt cctgcggggg gccccacgag 5340
ttctggcat tcagactgc ttagcattct cggaaggtt cttcaactgc ttgcttttcc 5400
caggcttgcc tttagtgtca tgtaagacat ttttaagtta tatttatttt gttgggtttt 5460
aaaattgcac agaactactaa gaccgaaagg ctggactctt gtttctcctt gaaagctttg 5520

EX05-004patentin.txt

```

cctttgtttt gaacttcctt tcccacttgg tagaaagagc ccagaagcag ccctggccct 5580
gtaagatgga ctctttcatc cttcagttgt atttagcttt gagtttctct gcatctgtcc 5640
accccatgtg tatataaccc agcccctggc tctgggggtg tcacctcgtc agtgcctttt 5700
gttctggagg agaggacccc ccccgctgc cgagaggctc tcttcctgtt ctgcaccctt 5760
ctcccatgga gaccttggag aaaactgaac tgttacaac ccctgcacag tgcctgtcaa 5820
acagatgcaa accttcctga ataaagcctt ggagaccaa aaaaaaaaaa aaaaa 5875

```

```

<210> 4
<211> 4505
<212> DNA
<213> Homo sapiens

```

```

<400> 4
gaattccgga gggagggtcc ccaacgctgg gcttgcttgg gggcagcccc tcagcacagc 60
cggggaccgg gaatgtggag gcgggaattc cttctggcag aatgctggag cctttgccct 120
gttgggacgc tgcgaaagat ctgaaagaac ctcagtgcc tcctggggac agggtaggtg 180
tgcagcctgg gaactccagg gtttggcagg gcaccatgga gaaagccggt ttggcttgg 240
cgcgtagcac aggggtgcaa tcagagggga cttgggaaag ccagcggcag gacagtgatg 300
ccctcccaag tccggagctg ctacccaag atcaggacaa gcctttcctg aggaaggcct 360
gcagccccag caacatacct gctgtcatca ttacagacat gggcaccag gaggatgggg 420
ccttgaggga gacgcaggga agccctcggg gcaacctgcc cctgaggaaa ctgtcctctt 480
cctcggcctc ctccacgggc ttctcctcat cctacgaaga ctcagaggag gacatctcca 540
gtgacctga ggcaccctg gacccaact cagctttcct gcataccctg gaccagcaga 600
aacctagagt gagcaaatca tggaggaaga taaaaacat ggtgactgg tctcccttcg 660
tcatgtcctt caagaagaag taccctgga tccagctggc aggacacgca gggagtcca 720
aggcagctgc caatggcagg atcctgaaga agcactgtga gtcagagcag cgctgcctgg 780
accggctgat ggtggatgtg ctgaggccct tcgtacctgc ctaccatggg gatgtggtga 840
aggacgggga gcgctacaac cagatggacg acctgtggc cgacttcgac tcgccctgtg 900
tgatggactg caagatggga atcaggacct acctggagga ggagctcac aaggcccga 960
agaagcccag cctgcggaag gacatgtacc agaagatgat cgaggtggac cccgaggccc 1020
ccaccgagga ggaaaaagca cagcgggctg tgaccaagcc acggtacatg cagtggcggg 1080
agaccatcag ctccacggcc acctgggggt tcaggatcga gggaatcaag aaagaagacg 1140
gcaccgtgaa ccgggacttc aagaagacca aaacgagga gcaggtcacc gaggccttca 1200
gagagtacac taaaggaaac cataacatcc tgatcgccta tcgggaccgg ctgaaggcca 1260
ttcgaaccac tctagaagtt tctcccttct tcaagtgcc cgaggtcatt ggcagctccc 1320
tcctcttcat ccacgacaag aaggaacagg ccaaagtgtg gatgatcgac ttggggaaaa 1380
ccacgcccct gcctgagggc cagaccctgc agcatgacgt cccctggcag gaggggaacc 1440

```

EX05-004patentin.txt

gggaggatgg ctacctctcg gggctcaata acctcgtcga catcctgacc gagatgtccc 1500
 aggatgcccc actcgctga gctgcccacg ccctccctgg cccccgcctg ggcctccttt 1560
 cctcctcctg tgcttccttt ctcgttccta acttttcctt cacttacacc tgactgaccc 1620
 tcctgaactg cactacaaga cactttgtag aagaggagat gagagtttct agtcattttc 1680
 ctaacttcag ggcttgagg tggtgtttgc actgcttttt gtagagaggg tcacctacta 1740
 gaagagaaat gccagtcctt agagggtgggt cagggtgtaga gctggagggg gtccctggct 1800
 gctgagggga ccctaccaga tgagccctgc ctctgggagc cccctaggaa gcaccagcct 1860
 ggacctacca cctgcggagg cctgctgccc cctggcggcc agtgctgtta gagtgtgcc 1920
 aagcacagcc ttatttctgc cggggcctcc ccaccggaga gccaggggg cggccgggt 1980
 tcctggtccc tggctgggag cagggtcttc tggtagtggg ggcacaaaac catcggggaa 2040
 ccacatgttg actgtgagca aagtgtcttc cgattagcag cctcagggtat gccctgggtg 2100
 cctctccagg gctgctcagg caaggcccc caccatctg gtatggaaac ctgccggctc 2160
 caggccagac ccaggagcca agagaaggct gaagccagct tggctgtgtt ctctgatcta 2220
 ggccttccca gaggaggcga gcagaagctg tgccacttgg aattgcaacc catgagttca 2280
 gaaggcacac tctgccatgc tgagctccaa ggggtgctacc aggggaagat gggatctata 2340
 gagtctctgg gccctggccc cagggaggag cacatttttc ttgacctca cctacctggt 2400
 gctagtgtgt caaccctgcc tgcatatcat ggctcctgtc atggggccca gagtcccttg 2460
 cagatataga aataggggag gagctcagg ctgcgccagg caggaagaag gcaggcttct 2520
 ggcttccaga ggtgccgcgg tggcctcctg gcatcatttg ttattgcctc tgaaacaagc 2580
 cttactgcct ggagggtta gattcctgct tccccaatgt agtggtggta tctttaggg 2640
 tatgtgtgtg atgccagggc gtgctccagg cacctcttcc tgaagtctct gcatttgag 2700
 attcgtggag aacctattta agcccaattt taactgaaag ccagttagtc tgatatggaa 2760
 gggaatgtaa aatttgctg acttcttaag aaaaaaccc ccagctctgt gcccctgct 2820
 ccttggggct tgccaccac tcctttgctg tcagaggtac aggagctggg agagtccagg 2880
 agctagggac acagagggag actatggacc aaggtgtgtg tgtctggagg aaccactgcc 2940
 caccaccaca cccgggggtc tctggggaac tgtcaacctg cccacgggac atgtacattt 3000
 ccccttttgt gctggaagtg tgagtgcac ttgctggggg tggagggtgg gacacatgag 3060
 gatgtataag tacagatttt aaaaaaggaa atcaacttac acttcctggc tcttgtttaa 3120
 aacagtgtgt agtcctgtg tgggccgact tgctaaaggc cacacacgcg cccggtggag 3180
 cacgagagac ctctggcag catgtgatct ggaaggcagg caggacgggg gcgttgggga 3240
 gccaaagtca actctgggcc tctggagcta tagtgacttt tgggctagaa gggaccctgg 3300
 tggctctgtc ttcagccatt tgcaggcag gggcatcatt aattcagacg taaagattct 3360
 atgaatatgg actggccaaa agttatcctt actccatctg tgaaagaagt ttgctaaagc 3420
 aaatcatgat atgaacaaaa attacagggg acctgtttaa gagaacaaaa tgttccaagc 3480

EX05-004patentin.txt

acttttaggca gacaccagct gtttgcaaac aatgtgctaa tatgcaaagtg atgtgcttat 3540
 taaaggaggc ccatggggcc tcttattggc aatacttggc tgtgggttac attaaatatg 3600
 tgaacatagt atgaagtagc atcatttttag ggttattctg ttacttaggg tttttgtttt 3660
 ctgttttttt tttctctttt tttgtattta ccgtgctagt tctcttctac acctactctg 3720
 tctctcaagc cattttgcca ctgccttccc tgccatctgg cccttccctt tgtctcagtg 3780
 ggatagatgg attgtgaaat ggaatctccc agaaccctg ccctggcagc ctggaagacc 3840
 gtgcctgccc agccctcgtc accacaggga ctcttgggt cctggcagtg catgtgccag 3900
 caggcaggac aaactctgtg tacctgtgcc caggtgaatg ggcgcagggt cctcttggcc 3960
 tgtcctgcgg ggggccccac gagttcctgg cattcagcac tgcttagcat tctcgggaagg 4020
 tttcttcaac tgcttgcttt tcccaggctt gccttttagtg tcatgtaaga catttttaag 4080
 ttatatttat tttgttgggg tttaaaattg cacagaacac taagaccgaa aggctggact 4140
 ctgttttctc cttgaaagct ttgcctttgt tttgaacttc ctttccact tggtagaaag 4200
 agcccagaag cagccctggc cctgtaagat ggactctttc atccttcagt tgtatttagc 4260
 tttgagtttc tctgcatctg tccaccccat gtgtatataa cccagcccct ggctctgggg 4320
 tggtcacctc gtcagtgcct tttgttctgg aggagaggac cccccgcct gccgagaggc 4380
 tctcttcctg ttctgcaccc ctctcccat gggaccttg agaaaactga actgttataa 4440
 acccctgcac agtgcctgtc aaacagatgc aaaccttcct gaataaagcc ttggagacgg 4500
 aattc 4505

<210> 5
 <211> 3010
 <212> DNA
 <213> Homo sapiens

<400> 5
 cctctttttt gtcttccata gcttgtgaga aaataatttc tgagcatttt tactttttaa 60
 gccatctcgt ccctacgagg tttgcgcctc tgggcatgta gtctacacag gacctgagaa 120
 tctgagaaac tgcagccgca cggttgttta tggagctttg ggcgggggct gagcccgcgg 180
 tcgtgcccc agcccgtgc ccaggccatg ccgccccatc tgcgcgcgga gccgcggctg 240
 ccgggcctcc ggggctgagc cgggagcgcg gggaggagga ggcgcggcg gcggagcagg 300
 agcgggagcc gcggcggcgg gcagcgcggg acccagtact atggctgtgt actgctatgc 360
 gctcaatagc ctggtgatca tgaatagcgc caacgagatg aagagcggcg gcggcccggg 420
 gccagtggc agcgagacgc ccccgccttc gaggagggca gtgctgagcc ccggcagcgt 480
 tttcagcccc gggagaggcg cctctttcct cttccccca gccgagtcgc tgtccccga 540
 ggagccccgg agccccgggg gctggcggag cgcccggcgc aggtgaata gtagcagcgg 600
 cagtggcagc ggcagcagcg gcagtagcgt gagcagccca agttgggctg gtcgcctgcg 660
 aggggaccgg cagcaggtgg tggcagccgg taccctctcc ccgccagggc cggaggaggc 720
 caagaggaag ctgcggatct tgcagcgcga gttgcagaac gtgcagggtga accagaaagt 780

EX05-004patentin.txt

gggcatgttt gagggcgaca tccaggcaca gagctccgcc attcaagcgc cccgcagccc 840
gcgtttgggc agggctcact cgccctcccc gtgccccttc cgcagcagca gtcagcccc 900
tggaagggtc ctggttcagg gcgcccggag cgaggaacgg aggacaaagt cctgggggga 960
gcaatgtcca gagacttcag gaaccgactc cgggagggaaa ggagggccca gcctatgctc 1020
ctcgcagggtg aagaaaggaa tgccacctct tcccggccgg gctgccccta caggatcaga 1080
ggctcagggt ccatccgctt ttgtaaggat ggagaagggt atccctgccca gtccccgctg 1140
tggtcacccc acagctatgg aaattgacaa aaggggctct cctaccccgg gaactcggag 1200
ctgcctagct ccctcattgg ggctgttcgg agctagctta acgatggcca cggaagtggc 1260
agcgagagtt acatccactg ggccacaccg tccacaggat cttgccctca ctgagccgtc 1320
tgggagagcc cgtgagcttg aggacctgca gccccagag gccctggtgg agaggcaggg 1380
gcagtttctg ggcagtgaga caagcccagc cccagaaagg ggcgggcccc gcgatggaga 1440
accccctggg aagatgggga aaggatatct gccctgtggc atgccgggct ctggggagcc 1500
tgaagtgggc aaaaggccag aggagacgac tgtgagcgtg caaagcgag agtcctctga 1560
tgccctgagc tggtcaggc tgcccagggc cctggcctcc gtagggcctg aggaggcccg 1620
aagtggggcc cccgtgggcg gggggcggtg gcagctctcc gacagagtgg agggagggtc 1680
cccaacgctg ggcttgcttg ggggcagccc ctgagcacag ccggggaccg ggaatgtgga 1740
ggcgggaatt ctttctggca gaatgctgga gcctttgccc tgttgggacg ctgcgaaaga 1800
tctgaaagaa cctcagtgcc ctccctggga cagggtgggt gtgcagcctg ggaactccag 1860
ggtttgccag ggcaccatgg agaaagccgg tttggcttgg acgctgtggca caggggtgca 1920
atcagagggg acttgggaaa gccagcggca ggacagtgat gccctcccaa gtccggagct 1980
gctaccccaa gatcaggaca agcctttcct gaggaaggcc tgcagcccca gcaacatacc 2040
tgctgtcatc attacagaca tgggcaccca ggaggatggg gccttgagg agacgcaggg 2100
aagccctcgg ggcaacctgc ccctgaggaa actgtcctct tcctcggcct cctccacggg 2160
cttctcctca tcctacgaag actcagagga ggacatctcc agtgaccctg agcgcaccct 2220
ggaccccaac tcagccttcc tgcataccct ggaccagcag aaacctagag tgtgacttct 2280
tggaagtgt tcccctcagt ggtactgctg gggcaacgtc caataccaag aatgatgtat 2340
agcatatttc atcttcctac actactctct ggaaagactg agccaattac ggggtcatct 2400
gtaaagtcta agtgctgcag tttccctacg accattggat tttgtttgta gtttgatatt 2460
gtcttactgt cccttgaagt tgtaatttgt aattctttag tttcaagag ggactctaca 2520
tgtttccttg tgatgatggc cttgagttac tcatgtgtac actgcctatt tatccccatt 2580
gagccccac tgccgaaca tgttgatggc atttatata gtaagctgtc agttacttaa 2640
tgtacaaata ttcttcatt ccatgttttt ctcttaaaat tttactttat tggccaggcg 2700
cagtggctca catctgtaat cccagcactt taggaggcca aggcgggcgg atcacctgag 2760
gtcaagagat tgagaccagc ctggccaaca tggtgaaacc ccgtctctac taaaaaatac 2820

EX05-004patentin.txt

aaaaattagc caggtgtagt ggtgggcacc tgtaatccca gctacttggg aggctgaggc 2880
 aggagaattg cttgaacctg agaggcggag gttgcggtga gccgagatag caccactgca 2940
 ctccagcctg ggcgaaagag ctaaactcca tctcaaaaat aaataaataa ataaaaaaaa 3000
 aaaaaaaaaa 3010

<210> 6
 <211> 3398
 <212> PRT
 <213> Homo sapiens

<400> 6

Gly Gly Gly Thr Cys Gly Gly Cys Cys Gly Ala Ala Gly Cys Cys Cys
 1 5 10 15
 Gly Ala Ala Cys Cys Gly Ala Ala Gly Gly Ala Gly Cys Gly Gly Gly
 20 25 30
 Cys Ala Thr Gly Ala Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly
 35 40 45
 Thr Gly Cys Cys Gly Thr Gly Gly Gly Ala Gly Cys Cys Thr Gly Ala
 50 55 60
 Ala Cys Gly Ala Gly Gly Cys Gly Gly Ala Gly Gly Cys Cys Gly Gly
 65 70 75 80
 Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Cys Gly Gly Cys Gly
 85 90 95
 Gly Cys Cys Cys Gly Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly
 100 105 110
 Ala Gly Gly Cys Gly Cys Cys Gly Cys Gly Ala Gly Gly Ala Gly Gly
 115 120 125
 Gly Cys Gly Gly Cys Gly Gly Cys Gly Gly Cys Ala Gly Cys Cys Gly
 130 135 140
 Gly Gly Ala Cys Ala Gly Cys Ala Gly Cys Gly Ala Cys Cys Thr Gly
 145 150 155 160
 Gly Gly Cys Cys Cys Gly Gly Cys Gly Cys Ala Gly Gly Gly Gly Cys
 165 170 175
 Cys Cys Cys Gly Gly Cys Gly Gly Gly Gly Cys Gly Gly Cys Cys Gly
 180 185 190
 Gly Ala Gly Gly Gly Gly Gly Gly Cys Gly Gly Gly Cys Cys Cys Thr
 195 200 205

EX05-004patentin.txt

Gly Gly Gly Cys Cys Cys Gly Gly Ala Cys Ala Gly Ala Gly Gly Gly
 210 215 220
 Gly Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Ala Cys Ala Gly Cys
 225 230 235 240
 Gly Ala Gly Cys Cys Thr Gly Ala Gly Ala Gly Gly Gly Cys Cys Gly
 245 250 255
 Gly Cys Cys Thr Cys Gly Gly Gly Cys Cys Thr Gly Cys Gly Cys Cys
 260 265 270
 Gly Gly Gly Gly Ala Cys Ala Gly Ala Gly Ala Gly Thr Cys Cys Gly
 275 280 285
 Cys Ala Gly Gly Cys Ala Gly Ala Ala Thr Thr Cys Thr Gly Gly Ala
 290 295 300
 Cys Ala Gly Ala Cys Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Ala
 305 310 315 320
 Gly Cys Cys Cys Gly Cys Gly Gly Cys Ala Gly Cys Thr Gly Gly Cys
 325 330 335
 Cys Thr Thr Gly Gly Ala Gly Thr Ala Gly Ala Gly Ala Cys Cys Gly
 340 345 350
 Ala Gly Ala Gly Gly Cys Cys Cys Ala Ala Gly Cys Ala Ala Ala Ala
 355 360 365
 Gly Ala Cys Gly Gly Ala Gly Cys Cys Ala Gly Ala Cys Ala Gly Gly
 370 375 380
 Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Gly Gly Ala Cys Gly Cys
 385 390 395 400
 Ala Thr Cys Thr Ala Gly Ala Ala Thr Gly Gly Ala Gly Cys Thr Gly
 405 410 415
 Gly Thr Cys Ala Gly Ala Gly Cys Thr Gly Gly Ala Gly Ala Cys Gly
 420 425 430
 Ala Cys Thr Thr Gly Thr Cys Thr Thr Thr Gly Gly Ala Cys Gly Gly
 435 440 445
 Ala Gly Ala Cys Cys Gly Gly Gly Ala Cys Ala Gly Ala Thr Gly Gly
 450 455 460
 Cys Cys Thr Thr Thr Gly Gly Ala Cys Thr Gly Ala Thr Cys Cys Gly
 465 470 475 480

EX05-004patentin.txt

Cys Ala Cys Ala Gly Gly Thr Cys Cys Gly Ala Cys Cys Thr Cys Cys
 485 490 495
 Ala Gly Thr Thr Thr Cys Ala Gly Cys Cys Cys Gly Ala Gly Gly Ala
 500 505 510
 Gly Gly Cys Cys Ala Gly Cys Cys Cys Cys Thr Gly Gly Ala Cys Ala
 515 520 525
 Cys Ala Gly Cys Cys Ala Gly Gly Gly Gly Thr Thr Cys Ala Thr Gly
 530 535 540
 Gly Gly Cys Cys Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Thr
 545 550 555 560
 Gly Gly Ala Ala Ala Cys Gly Cys Ala Thr Gly Gly Gly Thr Cys Ala
 565 570 575
 Cys Ala Gly Ala Cys Thr Cys Ala Gly Cys Cys Ala Gly Ala Gly Ala
 580 585 590
 Gly Gly Gly Thr Cys Ala Ala Gly Thr Cys Cys Thr Gly Gly Gly Cys
 595 600 605
 Thr Gly Ala Thr Ala Ala Cys Cys Thr Cys Thr Gly Gly Ala Cys Cys
 610 615 620
 Cys Ala Cys Cys Ala Gly Ala Ala Cys Ala Gly Thr Thr Cys Cys Ala
 625 630 635 640
 Gly Cys Cys Thr Cys Cys Ala Gly Ala Cys Thr Cys Ala Cys Cys Cys
 645 650 655
 Ala Gly Ala Ala Gly Gly Ala Gly Cys Cys Thr Gly Thr Cys Cys Cys
 660 665 670
 Thr Cys Ala Ala Ala Ala Gly Ala Gly Cys Cys Ala Ala Gly Thr Gly
 675 680 685
 Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly Ala Ala
 690 695 700
 Ala Gly Ala Ala Thr Thr Gly Thr Ala Thr Ala Cys Thr Gly Ala Thr
 705 710 715 720
 Gly Gly Cys Thr Cys Cys Ala Gly Gly Ala Cys Ala Cys Ala Ala Cys
 725 730 735
 Ala Gly Gly Ala Thr Ala Thr Thr Gly Ala Ala Gly Gly Thr Cys Cys
 740 745 750

EX05-004patentin.txt

Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Cys Ala Thr Ala Thr
 755 760 765
 Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Cys Ala Gly Ala
 770 775 780
 Ala Ala Ala Ala Ala Cys Ala Gly Gly Ala Thr Ala Cys Thr Gly Ala
 785 790 795 800
 Ala Gly Cys Ala Gly Cys Cys Ala Gly Gly Ala Ala Ala Cys Ala Gly
 805 810 815
 Cys Cys Thr Gly Gly Cys Ala Cys Thr Gly Gly Thr Gly Gly Thr Thr
 820 825 830
 Thr Cys Cys Ala Ala Ala Thr Ala Cys Ala Ala Cys Ala Gly Gly Ala
 835 840 845
 Thr Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly
 850 855 860
 Ala Cys Ala Cys Ala Ala Cys Cys Thr Ala Gly Cys Ala Cys Thr Gly
 865 870 875 880
 Ala Cys Gly Gly Thr Thr Cys Cys Cys Ala Gly Ala Cys Ala Gly Cys
 885 890 895
 Ala Cys Cys Thr Gly Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Cys
 900 905 910
 Cys Thr Cys Thr Thr Gly Gly Gly Ala Gly Ala Gly Cys Cys Thr Gly
 915 920 925
 Ala Gly Gly Ala Thr Gly Gly Cys Cys Cys Ala Thr Thr Ala Gly Ala
 930 935 940
 Gly Gly Ala Ala Cys Cys Ala Gly Ala Gly Cys Cys Thr Gly Gly Ala
 945 950 955 960
 Gly Ala Ala Thr Thr Gly Cys Thr Gly Ala Cys Thr Cys Ala Cys Cys
 965 970 975
 Thr Gly Thr Ala Cys Thr Cys Thr Cys Ala Cys Cys Thr Gly Ala Ala
 980 985 990
 Gly Thr Gly Thr Ala Gly Cys Cys Cys Cys Cys Thr Gly Thr Gly Cys
 995 1000 1005
 Cys Cys Thr Gly Thr Gly Cys Cys Cys Cys Gly Cys Cys Thr Cys
 1010 1015 1020

EX05-004patentin.txt

Ala Thr Cys Ala Thr Thr Ala cys cys cys cys Thr Gly Ala Gly
 1025 1030 1035
 Ala Cys Cys Cys Cys Thr Gly Ala Gly Cys Cys Thr Gly Ala Gly
 1040 1045 1050
 Gly Cys Cys Cys Ala Gly Cys cys Ala Gly Thr Gly Gly Gly Ala
 1055 1060 1065
 Cys Cys Cys Cys Cys Thr cys cys cys Gly Gly Gly Thr Thr
 1070 1075 1080
 Gly Ala Gly Gly Gly Gly Gly Gly Cys Ala Gly Cys Gly Gly Cys
 1085 1090 1095
 Gly Gly Cys Thr Thr Cys Thr Cys Cys Thr Cys Thr Gly Cys Cys
 1100 1105 1110
 Thr Cys Thr Thr Cys Thr Thr Thr Cys Gly Ala Cys Gly Ala Gly
 1115 1120 1125
 Thr Cys Thr Gly Ala Gly Gly Ala Thr Gly Ala Cys Gly Thr Gly
 1130 1135 1140
 Gly Thr Gly Gly Cys Cys Gly Gly Gly Gly Cys Gly Gly Ala
 1145 1150 1155
 Gly Gly Thr Gly Cys Cys Ala Gly Cys Gly Ala Thr Cys Cys Cys
 1160 1165 1170
 Gly Ala Gly Gly Ala Cys Ala Gly Gly Thr Cys Thr Gly Gly Gly
 1175 1180 1185
 Ala Gly Cys Ala Ala Ala Cys cys cys Thr Gly Gly Ala Ala Gly
 1190 1195 1200
 Ala Ala Gly Cys Thr Gly Ala Ala Gly Ala Cys Ala Gly Thr Thr
 1205 1210 1215
 Cys Thr Gly Ala Ala Gly Thr Ala Thr Thr Cys Ala Cys Cys Cys
 1220 1225 1230
 Thr Thr Thr Gly Thr Gly Gly Thr Cys Thr Cys Cys Thr Thr Cys
 1235 1240 1245
 Cys Gly Ala Ala Ala Ala cys Ala Cys Thr Ala Cys Cys Cys Thr
 1250 1255 1260
 Thr Gly Gly Gly Thr Cys Cys Ala Gly Cys Thr Thr Thr Cys Thr
 1265 1270 1275

EX05-004patentin.txt

Gly Gly Ala Cys Ala Thr Gly Cys Thr Gly Gly Gly Ala Ala Cys
 1280 1285 1290
 Thr Thr Cys Cys Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Gly
 1295 1300 1305
 Gly Ala Thr Gly Gly Thr Cys Gly Gly Ala Thr Thr Cys Thr Gly
 1310 1315 1320
 Ala Ala Ala Cys Gly Thr Thr Thr Cys Thr Gly Thr Cys Ala Gly
 1325 1330 1335
 Thr Gly Thr Gly Ala Gly Cys Ala Gly Cys Gly Cys Ala Gly Cys
 1340 1345 1350
 Cys Thr Gly Gly Ala Gly Cys Ala Gly Cys Thr Gly Ala Thr Gly
 1355 1360 1365
 Ala Ala Ala Gly Ala Cys Cys Cys Gly Cys Thr Gly Cys Gly Ala
 1370 1375 1380
 Cys Cys Thr Thr Thr Cys Gly Thr Gly Cys Cys Thr Gly Cys Cys
 1385 1390 1395
 Thr Ala Cys Thr Ala Thr Gly Gly Cys Ala Thr Gly Gly Thr Gly
 1400 1405 1410
 Cys Thr Gly Cys Ala Gly Gly Ala Thr Gly Gly Cys Cys Ala Gly
 1415 1420 1425
 Ala Cys Cys Thr Thr Cys Ala Ala Cys Cys Ala Gly Ala Thr Gly
 1430 1435 1440
 Gly Ala Ala Gly Ala Cys Cys Thr Cys Cys Thr Gly Gly Cys Thr
 1445 1450 1455
 Gly Ala Cys Thr Thr Thr Gly Ala Gly Gly Gly Cys Cys Cys Cys
 1460 1465 1470
 Thr Cys Cys Ala Thr Thr Ala Thr Gly Gly Ala Cys Thr Gly Cys
 1475 1480 1485
 Ala Ala Gly Ala Thr Gly Gly Gly Cys Ala Gly Cys Ala Gly Gly
 1490 1495 1500
 Ala Cys Cys Thr Ala Thr Cys Thr Gly Gly Ala Ala Gly Ala Gly
 1505 1510 1515
 Gly Ala Gly Cys Thr Ala Gly Thr Gly Ala Ala Gly Gly Cys Ala
 1520 1525 1530

EX05-004patentin.txt

Cys Gly Gly Gly Ala Ala Cys Gly Thr Cys Cys Cys Cys Gly Thr
 1535 1540 1545
 Cys Cys Cys Cys Gly Gly Ala Ala Gly Gly Ala Cys Ala Thr Gly
 1550 1555 1560
 Thr Ala Thr Gly Ala Gly Ala Ala Gly Ala Thr Gly Gly Thr Gly
 1565 1570 1575
 Gly Cys Thr Gly Thr Gly Gly Ala Cys Cys Cys Thr Gly Gly Gly
 1580 1585 1590
 Gly Cys Cys Cys Cys Thr Ala Cys Cys Cys Cys Thr Gly Ala Gly
 1595 1600 1605
 Gly Ala Gly Cys Ala Thr Gly Cys Cys Cys Ala Gly Gly Gly Thr
 1610 1615 1620
 Gly Cys Ala Gly Thr Cys Ala Cys Cys Ala Ala Gly Cys Cys Cys
 1625 1630 1635
 Cys Gly Cys Thr Ala Cys Ala Thr Gly Cys Ala Gly Thr Gly Gly
 1640 1645 1650
 Ala Gly Gly Gly Ala Ala Ala Cys Cys Ala Thr Gly Ala Gly Cys
 1655 1660 1665
 Thr Cys Cys Ala Cys Cys Thr Cys Thr Ala Cys Cys Cys Thr Gly
 1670 1675 1680
 Gly Gly Cys Thr Thr Cys Cys Gly Gly Ala Thr Cys Gly Ala Gly
 1685 1690 1695
 Gly Gly Cys Ala Thr Cys Ala Ala Gly Ala Ala Gly Cys Ala
 1700 1705 1710
 Gly Ala Thr Gly Gly Gly Ala Cys Cys Thr Gly Thr Ala Ala Cys
 1715 1720 1725
 Ala Cys Cys Ala Ala Cys Thr Thr Cys Ala Ala Gly Ala Ala Gly
 1730 1735 1740
 Ala Cys Gly Cys Ala Gly Gly Cys Ala Cys Thr Gly Gly Ala Gly
 1745 1750 1755
 Cys Ala Gly Gly Thr Gly Ala Cys Ala Ala Ala Ala Gly Thr Gly
 1760 1765 1770
 Cys Thr Gly Gly Ala Gly Gly Ala Cys Thr Thr Cys Gly Thr Gly
 1775 1780 1785

EX05-004patentin.txt

Gly Ala Thr Gly Gly Ala Gly Ala Cys Cys Ala Cys Gly Thr Cys
 1790 1795 1800
 Ala Thr Cys Cys Thr Gly Cys Ala Ala Ala Ala Gly Thr Ala Cys
 1805 1810 1815
 Gly Thr Gly Gly Cys Ala Thr Gly Cys Cys Thr Ala Gly Ala Ala
 1820 1825 1830
 Gly Ala Ala Cys Thr Thr Cys Gly Thr Gly Ala Ala Gly Cys Thr
 1835 1840 1845
 Cys Thr Gly Gly Ala Gly Ala Thr Cys Thr Cys Cys Cys Cys Cys
 1850 1855 1860
 Thr Thr Cys Thr Thr Cys Ala Ala Gly Ala Cys Cys Cys Ala Cys
 1865 1870 1875
 Gly Ala Gly Gly Thr Gly Gly Thr Ala Gly Gly Cys Ala Gly Cys
 1880 1885 1890
 Thr Cys Cys Cys Thr Cys Cys Thr Cys Thr Thr Cys Gly Thr Gly
 1895 1900 1905
 Cys Ala Cys Gly Ala Cys Cys Ala Cys Ala Cys Cys Gly Gly Cys
 1910 1915 1920
 Cys Thr Gly Gly Cys Cys Ala Ala Gly Gly Thr Cys Thr Gly Gly
 1925 1930 1935
 Ala Thr Gly Ala Thr Ala Gly Ala Cys Thr Thr Cys Gly Gly Cys
 1940 1945 1950
 Ala Ala Gly Ala Cys Gly Gly Thr Gly Gly Cys Cys Thr Thr Gly
 1955 1960 1965
 Cys Cys Cys Gly Ala Cys Cys Ala Cys Cys Ala Gly Ala Cys Gly
 1970 1975 1980
 Cys Thr Cys Ala Gly Cys Cys Ala Cys Ala Gly Gly Cys Thr Gly
 1985 1990 1995
 Cys Cys Cys Thr Gly Gly Gly Cys Thr Gly Ala Gly Gly Gly Cys
 2000 2005 2010
 Ala Ala Cys Cys Gly Thr Gly Ala Gly Gly Ala Cys Gly Gly Cys
 2015 2020 2025
 Thr Ala Cys Cys Thr Cys Thr Gly Gly Gly Gly Cys Cys Thr Gly
 2030 2035 2040

EX05-004patentin.txt

Gly Ala Cys Ala Ala Cys Ala Thr Gly Ala Thr Cys Thr Gly Cys
 2045 2050 2055
 Cys Thr Cys Cys Thr Gly Cys Ala Gly Gly Gly Gly Cys Thr Gly
 2060 2065 2070
 Gly Cys Ala Cys Ala Gly Ala Gly Cys Thr Gly Ala Gly Cys Thr
 2075 2080 2085
 Gly Cys Thr Cys Ala Gly Cys Cys Ala Cys Cys Ala Thr Cys Ala
 2090 2095 2100
 Gly Gly Thr Thr Ala Ala Thr Thr Gly Gly Ala Thr Gly Gly Cys
 2105 2110 2115
 Gly Cys Cys Ala Gly Thr Cys Thr Gly Gly Cys Thr Gly Gly Ala
 2120 2125 2130
 Gly Gly Ala Gly Cys Cys Cys Thr Gly Ala Gly Ala Thr Gly Cys
 2135 2140 2145
 Cys Ala Thr Gly Gly Gly Ala Gly Gly Cys Cys Thr Gly Ala Gly
 2150 2155 2160
 Gly Thr Thr Gly Gly Cys Cys Ala Cys Gly Gly Gly Gly Gly Ala
 2165 2170 2175
 Gly Cys Thr Gly Gly Cys Cys Thr Cys Cys Ala Gly Gly Gly Ala
 2180 2185 2190
 Cys Gly Gly Gly Ala Gly Ala Gly Ala Thr Thr Gly Thr Gly Thr
 2195 2200 2205
 Cys Ala Thr Gly Thr Gly Cys Cys Ala Cys Ala Cys Gly Ala Gly
 2210 2215 2220
 Ala Cys Cys Ala Ala Cys Gly Thr Gly Gly Ala Ala Ala Ala Gly
 2225 2230 2235
 Thr Cys Thr Gly Ala Ala Gly Gly Gly Cys Cys Thr Thr Gly Gly
 2240 2245 2250
 Gly Ala Gly Ala Cys Cys Ala Gly Gly Thr Ala Gly Cys Ala Cys
 2255 2260 2265
 Cys Thr Gly Gly Cys Cys Cys Cys Ala Thr Cys Ala Thr Gly Ala
 2270 2275 2280
 Thr Gly Cys Ala Gly Gly Gly Gly Thr Thr Thr Thr Gly Gly Gly
 2285 2290 2295

EX05-004patentin.txt

Gly Ala Cys Cys Thr Gly Gly Ala Ala Gly Gly Ala Ala Gly Gly
 2300 2305 2310
 Thr Gly Ala Thr Gly Ala Gly Gly Cys Ala Gly Thr Gly Ala Gly
 2315 2320 2325
 Thr Cys Ala Gly Ala Ala Ala Ala Ala Cys Cys Ala Gly Ala Ala
 2330 2335 2340
 Cys Gly Gly Gly Gly Thr Cys Cys Cys Gly Gly Ala Thr Cys
 2345 2350 2355
 Thr Gly Cys Cys Gly Gly Gly Ala Ala Gly Gly Cys Thr Thr Cys
 2360 2365 2370
 Thr Gly Ala Gly Gly Gly Gly Cys Thr Gly Cys Cys Cys Thr Gly
 2375 2380 2385
 Ala Gly Ala Gly Cys Ala Thr Thr Cys Ala Gly Thr Thr Cys Ala
 2390 2395 2400
 Cys Ala Thr Gly Thr Cys Ala Cys Ala Gly Gly Gly Thr Ala Thr
 2405 2410 2415
 Gly Gly Thr Gly Thr Gly Ala Cys Ala Gly Gly Gly Thr Gly Cys
 2420 2425 2430
 Cys Thr Gly Thr Gly Gly Ala Cys Ala Cys Ala Thr Gly Ala Ala
 2435 2440 2445
 Thr Cys Ala Cys Thr Thr Cys Thr Ala Ala Cys Cys Thr Gly Cys
 2450 2455 2460
 Cys Thr Cys Cys Cys Thr Gly Thr Cys Ala Gly Cys Cys Thr Cys
 2465 2470 2475
 Cys Ala Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Thr Gly Gly
 2480 2485 2490
 Cys Thr Gly Ala Gly Gly Cys Cys Ala Gly Gly Gly Ala Cys Thr
 2495 2500 2505
 Gly Gly Gly Thr Cys Ala Gly Gly Cys Thr Cys Ala Thr Cys Thr
 2510 2515 2520
 Gly Thr Gly Gly Cys Gly Cys Cys Thr Cys Ala Gly Ala Gly Gly
 2525 2530 2535
 Gly Thr Cys Ala Gly Cys Ala Thr Cys Ala Thr Thr Gly Gly Thr
 2540 2545 2550

EX05-004patentin.txt

Gly Ala Ala Cys Ala Gly Ala Thr Gly Cys Ala Gly Gly Cys Gly
 2555 2560 2565
 Cys Thr Gly Cys Thr Gly Gly Ala Cys Cys Ala Thr Cys Thr Gly
 2570 2575 2580
 Gly Gly Gly Ala Gly Ala Gly Thr Gly Ala Cys Ala Gly Thr Cys
 2585 2590 2595
 Cys Ala Thr Gly Thr Cys Thr Thr Cys Ala Cys Cys Ala Gly Gly
 2600 2605 2610
 Gly Ala Gly Cys Cys Ala Thr Thr Thr Gly Ala Gly Thr Gly Cys
 2615 2620 2625
 Thr Gly Ala Gly Cys Gly Ala Cys Ala Ala Gly Ala Gly Gly Cys
 2630 2635 2640
 Thr Cys Ala Gly Ala Gly Gly Gly Cys Ala Thr Gly Ala Cys Cys
 2645 2650 2655
 Cys Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly Ala Thr Gly
 2660 2665 2670
 Cys Gly Gly Cys Cys Thr Gly Ala Gly Gly Gly Cys Thr Gly Ala
 2675 2680 2685
 Thr Ala Cys Cys Gly Cys Thr Gly Gly Gly Cys Gly Gly Thr Ala
 2690 2695 2700
 Thr Cys Cys Thr Gly Cys Cys Cys Thr Gly Cys Thr Gly Thr Gly
 2705 2710 2715
 Gly Cys Cys Cys Thr Gly Thr Gly Gly Gly Ala Thr Cys Cys Thr
 2720 2725 2730
 Cys Cys Gly Thr Gly Thr Thr Cys Cys Thr Cys Gly Gly Cys Gly
 2735 2740 2745
 Gly Ala Cys Thr Cys Thr Gly Cys Thr Gly Ala Cys Cys Thr Cys
 2750 2755 2760
 Cys Thr Gly Cys Ala Gly Ala Cys Cys Cys Ala Ala Ala Cys Cys
 2765 2770 2775
 Ala Cys Ala Gly Cys Cys Ala Cys Ala Thr Cys Cys Cys Ala Gly
 2780 2785 2790
 Cys Thr Thr Cys Thr Gly Thr Gly Cys Cys Ala Gly Cys Ala Cys
 2795 2800 2805

EX05-004patentin.txt

Thr Gly Thr Gly Ala Cys Ala Gly Thr Ala Cys Cys Thr Cys Gly
 2810 2815 2820
 Cys Thr Cys Cys Thr Cys Thr Gly Thr Gly Cys Ala Cys Cys Ala
 2825 2830 2835
 Gly Ala Thr Cys Cys Gly Gly Cys Cys Thr Cys Ala Gly Gly Ala
 2840 2845 2850
 Cys Thr Thr Ala Cys Ala Cys Cys Thr Cys Cys Thr Gly Cys Cys
 2855 2860 2865
 Thr Gly Ala Cys Cys Cys Cys Cys Ala Gly Gly Cys Thr Thr Cys
 2870 2875 2880
 Thr Cys Thr Cys Thr Cys Cys Thr Thr Thr Cys Thr Cys Cys Cys
 2885 2890 2895
 Ala Gly Cys Ala Ala Ala Cys Thr Gly Cys Ala Gly Thr Gly Gly
 2900 2905 2910
 Cys Ala Gly Ala Ala Ala Gly Gly Ala Gly Gly Thr Thr Cys Ala
 2915 2920 2925
 Gly Ala Gly Gly Cys Thr Gly Gly Gly Ala Ala Ala Gly Thr Gly
 2930 2935 2940
 Gly Gly Cys Cys Thr Cys Cys Cys Thr Thr Gly Cys Ala Ala
 2945 2950 2955
 Cys Thr Cys Ala Gly Ala Gly Cys Thr Gly Cys Thr Gly Cys Ala
 2960 2965 2970
 Cys Thr Cys Ala Gly Gly Ala Gly Gly Gly Cys Cys Cys Ala
 2975 2980 2985
 Thr Cys Cys Ala Ala Thr Cys Cys Cys Gly Gly Gly Cys Cys Cys
 2990 2995 3000
 Cys Thr Gly Cys Ala Gly Gly Gly Ala Ala Ala Ala Gly Cys Gly
 3005 3010 3015
 Cys Thr Gly Gly Gly Thr Gly Thr Gly Thr Gly Thr Cys Ala Gly
 3020 3025 3030
 Ala Gly Gly Cys Gly Cys Ala Gly Gly Gly Thr Gly Gly Thr
 3035 3040 3045
 Gly Gly Gly Gly Cys Thr Gly Cys Cys Ala Gly Cys Cys Ala Gly
 3050 3055 3060

EX05-004patentin.txt

Gly Ala Cys Cys Cys Thr Gly Gly Cys Cys Thr Gly Cys Ala Gly
 3065 3070 3075
 Cys Cys Thr Gly Ala Thr Cys Cys Ala Ala Ala Cys Cys Ala Ala
 3080 3085 3090
 Ala Gly Ala Cys Thr Gly Thr Ala Gly Ala Ala Cys Cys Cys Thr
 3095 3100 3105
 Gly Gly Gly Gly Thr Gly Thr Gly Gly Cys Thr Ala Ala Cys Gly
 3110 3115 3120
 Gly Cys Cys Cys Cys Thr Cys Cys Ala Gly Cys Ala Cys Cys Cys
 3125 3130 3135
 Ala Thr Ala Gly Cys Cys Ala Gly Gly Thr Cys Thr Thr Cys Cys
 3140 3145 3150
 Thr Gly Gly Cys Cys Cys Thr Thr Gly Ala Gly Gly Cys Thr Gly
 3155 3160 3165
 Gly Gly Cys Thr Gly Gly Cys Gly Gly Ala Cys Ala Gly Gly Cys
 3170 3175 3180
 Ala Cys Cys Thr Ala Cys Cys Thr Cys Thr Thr Cys Cys Thr Thr
 3185 3190 3195
 Ala Ala Gly Cys Thr Gly Ala Ala Gly Cys Thr Cys Cys Ala
 3200 3205 3210
 Cys Ala Cys Thr Gly Thr Cys Thr Thr Cys Cys Ala Gly Gly Gly
 3215 3220 3225
 Cys Thr Gly Ala Gly Gly Ala Gly Ala Thr Gly Cys Thr Cys Thr
 3230 3235 3240
 Cys Cys Thr Thr Thr Thr Cys Thr Ala Cys Thr Gly Ala Cys Cys
 3245 3250 3255
 Ala Thr Cys Thr Thr Gly Ala Thr Ala Cys Thr Thr Ala Thr Thr
 3260 3265 3270
 Thr Ala Thr Ala Cys Gly Ala Gly Ala Gly Gly Cys Ala Gly Thr
 3275 3280 3285
 Thr Gly Cys Thr Gly Gly Ala Cys Gly Gly Gly Gly Thr Ala Gly
 3290 3295 3300
 Thr Ala Cys Thr Gly Gly Gly Ala Ala Gly Cys Ala Gly Gly Ala
 3305 3310 3315

EX05-004patentin.txt

Gly Gly Cys Ala Gly Ala Ala Thr Gly Gly Cys Thr Cys Thr Gly
 3320 3325 3330

Cys Thr Gly Ala Gly Cys Cys Thr Ala Cys Cys Cys
 3335 3340 3345

Ala Thr Gly Ala Cys Ala Ala Cys Ala Cys Cys Cys Ala Ala
 3350 3355 3360

Thr Ala Ala Ala Cys Ala Gly Ala Ala Cys Ala Thr Thr Cys Ala
 3365 3370 3375

Gly Ala Gly Cys Cys Ala Ala Ala Ala Ala Ala Ala Ala Ala
 3380 3385 3390

Ala Ala Ala Ala Ala
 3395

<210> 7
 <211> 2052
 <212> PRT
 <213> Homo sapiens

<400> 7

Ala Thr Gly Ala Gly Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Thr
 1 5 10 15

Gly Cys Cys Gly Thr Gly Gly Gly Ala Gly Cys Cys Thr Gly Ala Ala
 20 25 30

Cys Gly Ala Gly Gly Cys Gly Gly Ala Gly Gly Cys Cys Gly Gly Gly
 35 40 45

Gly Cys Gly Cys Thr Gly Cys Cys Cys Gly Cys Gly Gly Cys Gly Gly
 50 55 60

Cys Cys Cys Gly Cys Ala Thr Gly Gly Gly Ala Cys Thr Gly Gly Ala
 65 70 75 80

Gly Gly Cys Gly Cys Cys Gly Cys Gly Ala Gly Gly Ala Gly Gly Gly
 85 90 95

Cys Gly Gly Cys Gly Gly Cys Gly Gly Cys Ala Gly Cys Cys Gly Gly
 100 105 110

Gly Ala Cys Ala Gly Cys Ala Gly Cys Gly Ala Cys Cys Thr Gly Gly
 115 120 125

Gly Cys Cys Cys Gly Gly Cys Gly Cys Ala Gly Gly Gly Cys Cys
 130 135 140

EX05-004patentin.txt

Cys Cys Gly Gly Cys Gly Gly Gly Gly Cys Gly Gly Cys Cys Gly Gly
 145 150 155 160
 Ala Gly Gly Gly Gly Gly Gly Cys Gly Gly Gly Cys Cys Cys Thr Gly
 165 170 175
 Gly Gly Cys Cys Cys Gly Gly Ala Cys Ala Gly Ala Gly Gly Gly Gly
 180 185 190
 Thr Cys Cys Ala Gly Cys Cys Thr Cys Cys Ala Cys Ala Gly Cys Gly
 195 200 205
 Ala Gly Cys Cys Thr Gly Ala Gly Ala Gly Gly Gly Cys Cys Gly Gly
 210 215 220
 Cys Cys Thr Cys Gly Gly Gly Cys Cys Thr Gly Cys Gly Cys Cys Gly
 225 230 235 240
 Gly Gly Gly Ala Cys Ala Gly Ala Gly Ala Gly Thr Cys Cys Gly Cys
 245 250 255
 Ala Gly Gly Cys Ala Gly Ala Ala Thr Thr Cys Thr Gly Gly Ala Cys
 260 265 270
 Ala Gly Ala Cys Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Ala Gly
 275 280 285
 Cys Cys Cys Gly Cys Gly Gly Cys Ala Gly Cys Thr Gly Gly Cys Cys
 290 295 300
 Thr Thr Gly Gly Ala Gly Thr Ala Gly Ala Gly Ala Cys Cys Gly Ala
 305 310 315 320
 Gly Ala Gly Gly Cys Cys Cys Ala Ala Gly Cys Ala Ala Ala Ala Gly
 325 330 335
 Ala Cys Gly Gly Ala Gly Cys Cys Ala Gly Ala Cys Ala Gly Gly Thr
 340 345 350
 Cys Cys Ala Gly Cys Cys Thr Cys Cys Gly Gly Ala Cys Gly Cys Ala
 355 360 365
 Thr Cys Thr Ala Gly Ala Ala Thr Gly Gly Ala Gly Cys Thr Gly Gly
 370 375 380
 Thr Cys Ala Gly Ala Gly Cys Thr Gly Gly Ala Gly Ala Cys Gly Ala
 385 390 395 400
 Cys Thr Thr Gly Thr Cys Thr Thr Thr Gly Gly Ala Cys Gly Gly Ala
 405 410 415

EX05-004patentin.txt

Gly Ala Cys Cys Gly Gly Gly Ala Cys Ala Gly Ala Thr Gly Gly Cys
 420 425 430
 Cys Thr Thr Thr Gly Gly Ala Cys Thr Gly Ala Thr Cys Cys Gly Cys
 435 440 445
 Ala Cys Ala Gly Gly Thr Cys Cys Gly Ala Cys Cys Thr Cys Cys Ala
 450 455 460
 Gly Thr Thr Thr Cys Ala Gly Cys Cys Cys Gly Ala Gly Gly Ala Gly
 465 470 475 480
 Gly Cys Cys Ala Gly Cys Cys Cys Cys Thr Gly Gly Ala Cys Ala Cys
 485 490 495
 Ala Gly Cys Cys Ala Gly Gly Gly Gly Thr Thr Cys Ala Thr Gly Gly
 500 505 510
 Gly Cys Cys Cys Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Thr Gly
 515 520 525
 Gly Ala Ala Ala Cys Gly Cys Ala Thr Gly Gly Gly Thr Cys Ala Cys
 530 535 540
 Ala Gly Ala Cys Thr Cys Ala Gly Cys Cys Ala Gly Ala Gly Ala Gly
 545 550 555 560
 Gly Gly Thr Cys Ala Ala Gly Thr Cys Cys Thr Gly Gly Gly Cys Thr
 565 570 575
 Gly Ala Thr Ala Ala Cys Cys Thr Cys Thr Gly Gly Ala Cys Cys Cys
 580 585 590
 Ala Cys Cys Ala Gly Ala Ala Cys Ala Gly Thr Thr Cys Cys Ala Gly
 595 600 605
 Cys Cys Thr Cys Cys Ala Gly Ala Cys Thr Cys Ala Cys Cys Cys Ala
 610 615 620
 Gly Ala Ala Gly Gly Ala Gly Cys Cys Thr Gly Thr Cys Cys Cys Thr
 625 630 635 640
 Cys Ala Ala Ala Ala Gly Ala Gly Cys Cys Ala Ala Gly Thr Gly Cys
 645 650 655
 Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly Ala Ala Ala
 660 665 670
 Gly Ala Ala Thr Thr Gly Thr Ala Thr Ala Cys Thr Gly Ala Thr Gly
 675 680 685

EX05-004patentin.txt

Gly Cys Thr Cys Cys Ala Gly Gly Ala Cys Ala Cys Ala Cys Ala
 690 695 700

Gly Gly Ala Thr Ala Thr Thr Gly Ala Ala Gly Gly Thr Cys Cys Cys
 705 710 715 720

Thr Gly Gly Ala Cys Ala Gly Ala Gly Cys Cys Ala Thr Ala Thr Ala
 725 730 735

Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Cys Ala Gly Ala Ala
 740 745 750

Ala Ala Ala Ala Cys Ala Gly Gly Ala Thr Ala Cys Thr Gly Ala Ala
 755 760 765

Gly Cys Ala Gly Cys Cys Ala Gly Gly Ala Ala Ala Cys Ala Gly Cys
 770 775 780

Cys Thr Gly Gly Cys Ala Cys Thr Gly Gly Thr Gly Gly Thr Thr Thr
 785 790 795 800

Cys Cys Ala Ala Ala Thr Ala Cys Ala Ala Cys Ala Gly Gly Ala Thr
 805 810 815

Ala Cys Thr Gly Ala Thr Gly Gly Cys Thr Cys Cys Thr Gly Gly Ala
 820 825 830

Cys Ala Cys Ala Ala Cys Cys Thr Ala Gly Cys Ala Cys Thr Gly Ala
 835 840 845

Cys Gly Gly Thr Thr Cys Cys Cys Ala Gly Ala Cys Ala Gly Cys Ala
 850 855 860

Cys Cys Thr Gly Gly Gly Ala Cys Ala Gly Ala Cys Thr Gly Cys Cys
 865 870 875 880

Thr Cys Thr Thr Gly Gly Gly Ala Gly Ala Gly Cys Cys Thr Gly Ala
 885 890 895

Gly Gly Ala Thr Gly Gly Cys Cys Cys Ala Thr Thr Ala Gly Ala Gly
 900 905 910

Gly Ala Ala Cys Cys Ala Gly Ala Gly Cys Cys Thr Gly Gly Ala Gly
 915 920 925

Ala Ala Thr Thr Gly Cys Thr Gly Ala Cys Thr Cys Ala Cys Cys Thr
 930 935 940

Gly Thr Ala Cys Thr Cys Thr Cys Ala Cys Cys Thr Gly Ala Ala Gly
 945 950 955 960

Page 27

EX05-004patentin.txt

Ala Ala Ala Cys Ala Cys Thr Thr Gly Gly
 1220 1225 1230

Gly Thr Cys Cys Ala Gly Cys Thr Thr Thr Cys Thr Gly Gly Ala
 1235 1240 1245

Cys Ala Thr Gly Cys Thr Gly Gly Gly Ala Ala Cys Thr Thr Cys
 1250 1255 1260

Cys Ala Gly Gly Cys Ala Gly Gly Ala Gly Ala Gly Gly Ala Thr
 1265 1270 1275

Gly Gly Thr Cys Gly Gly Ala Thr Thr Cys Thr Gly Ala Ala Ala
 1280 1285 1290

Cys Gly Thr Thr Thr Cys Thr Gly Thr Cys Ala Gly Thr Gly Thr
 1295 1300 1305

Gly Ala Gly Cys Ala Gly Cys Gly Cys Ala Gly Cys Cys Thr Gly
 1310 1315 1320

Gly Ala Gly Cys Ala Gly Cys Thr Gly Ala Thr Gly Ala Ala Ala
 1325 1330 1335

Gly Ala Cys Cys Cys Gly Cys Thr Gly Cys Gly Ala Cys Cys Thr
 1340 1345 1350

Thr Thr Cys Gly Thr Gly Cys Cys Thr Gly Cys Cys Thr Ala Cys
 1355 1360 1365

Thr Ala Thr Gly Gly Cys Ala Thr Gly Gly Thr Gly Cys Thr Gly
 1370 1375 1380

Cys Ala Gly Gly Ala Thr Gly Gly Cys Cys Ala Gly Ala Cys Cys
 1385 1390 1395

Thr Thr Cys Ala Ala Cys Cys Ala Gly Ala Thr Gly Gly Ala Ala
 1400 1405 1410

Gly Ala Cys Cys Thr Cys Cys Thr Gly Gly Cys Thr Gly Ala Cys
 1415 1420 1425

Thr Thr Thr Gly Ala Gly Gly Gly Cys Cys Cys Cys Thr Cys Cys
 1430 1435 1440

Ala Thr Thr Ala Thr Gly Gly Ala Cys Thr Gly Cys Ala Ala Gly
 1445 1450 1455

Ala Thr Gly Gly Gly Cys Ala Gly Cys Ala Gly Gly Ala Cys Cys
 1460 1465 1470

EX05-004patentin.txt

Thr Ala Thr Cys Thr Gly Gly Ala Ala Gly Ala Gly Gly Ala Gly
 1475 1480 1485

Cys Thr Ala Gly Thr Gly Ala Ala Gly Gly Cys Ala Cys Gly Gly
 1490 1495 1500

Gly Ala Ala Cys Gly Thr Cys Cys Cys Gly Thr Cys Cys Cys
 1505 1510 1515

Cys Gly Gly Ala Ala Gly Gly Ala Cys Ala Thr Gly Thr Ala Thr
 1520 1525 1530

Gly Ala Gly Ala Ala Gly Ala Thr Gly Gly Thr Gly Gly Cys Thr
 1535 1540 1545

Gly Thr Gly Gly Ala Cys Cys Cys Thr Gly Gly Gly Gly Cys Cys
 1550 1555 1560

Cys Cys Thr Ala Cys Cys Cys Cys Thr Gly Ala Gly Gly Ala Gly
 1565 1570 1575

Cys Ala Thr Gly Cys Cys Cys Ala Gly Gly Gly Thr Gly Cys Ala
 1580 1585 1590

Gly Thr Cys Ala Cys Cys Ala Ala Gly Cys Cys Cys Cys Gly Cys
 1595 1600 1605

Thr Ala Cys Ala Thr Gly Cys Ala Gly Thr Gly Gly Ala Gly Gly
 1610 1615 1620

Gly Ala Ala Ala Cys Cys Ala Thr Gly Ala Gly Cys Thr Cys Cys
 1625 1630 1635

Ala Cys Cys Thr Cys Thr Ala Cys Cys Cys Thr Gly Gly Gly Cys
 1640 1645 1650

Thr Thr Cys Cys Gly Gly Ala Thr Cys Gly Ala Gly Gly Gly Cys
 1655 1660 1665

Ala Thr Cys Ala Ala Gly Ala Ala Gly Gly Cys Ala Gly Ala Thr
 1670 1675 1680

Gly Gly Gly Ala Cys Cys Thr Gly Thr Ala Ala Cys Ala Cys Cys
 1685 1690 1695

Ala Ala Cys Thr Thr Cys Ala Ala Gly Ala Ala Gly Ala Cys Gly
 1700 1705 1710

Cys Ala Gly Gly Cys Ala Cys Thr Gly Gly Ala Gly Cys Ala Gly
 1715 1720 1725

EX05-004patentin.txt

Gly Thr Gly Ala Cys Ala Ala Ala Ala Gly Thr Gly Cys Thr Gly
 1730 1735 1740

Gly Ala Gly Gly Ala Cys Thr Thr Cys Gly Thr Gly Gly Ala Thr
 1745 1750 1755

Gly Gly Ala Gly Ala Cys Cys Ala Cys Gly Thr Cys Ala Thr Cys
 1760 1765 1770

Cys Thr Gly Cys Ala Ala Ala Ala Gly Thr Ala Cys Gly Thr Gly
 1775 1780 1785

Gly Cys Ala Thr Gly Cys Cys Thr Ala Gly Ala Ala Gly Ala Ala
 1790 1795 1800

Cys Thr Thr Cys Gly Thr Gly Ala Ala Gly Cys Thr Cys Thr Gly
 1805 1810 1815

Gly Ala Gly Ala Thr Cys Thr Cys Cys Cys Cys Thr Thr Cys
 1820 1825 1830

Thr Thr Cys Ala Ala Gly Ala Cys Cys Cys Ala Cys Gly Ala Gly
 1835 1840 1845

Gly Thr Gly Gly Thr Ala Gly Gly Cys Ala Gly Cys Thr Cys Cys
 1850 1855 1860

Cys Thr Cys Cys Thr Cys Thr Thr Cys Gly Thr Gly Cys Ala Cys
 1865 1870 1875

Gly Ala Cys Cys Ala Cys Ala Cys Cys Gly Gly Cys Cys Thr Gly
 1880 1885 1890

Gly Cys Cys Ala Ala Gly Gly Thr Cys Thr Gly Gly Ala Thr Gly
 1895 1900 1905

Ala Thr Ala Gly Ala Cys Thr Thr Cys Gly Gly Cys Ala Ala Gly
 1910 1915 1920

Ala Cys Gly Gly Thr Gly Gly Cys Cys Thr Thr Gly Cys Cys Cys
 1925 1930 1935

Gly Ala Cys Cys Ala Cys Cys Ala Gly Ala Cys Gly Cys Thr Cys
 1940 1945 1950

Ala Gly Cys Cys Ala Cys Ala Gly Gly Cys Thr Gly Cys Cys Cys
 1955 1960 1965

Thr Gly Gly Gly Cys Thr Gly Ala Gly Gly Gly Cys Ala Ala Cys
 1970 1975 1980

EX05-004patentin.txt
 Cys Gly Thr Gly Ala Gly Gly Ala Cys Gly Gly Cys Thr Ala Cys
 1985 1990 1995

Cys Thr Cys Thr Gly Gly Gly Gly Cys Cys Thr Gly Gly Ala Cys
 2000 2005 2010

Ala Ala Cys Ala Thr Gly Ala Thr Cys Thr Gly Cys Cys Thr Cys
 2015 2020 2025

Cys Thr Gly Cys Ala Gly Gly Gly Gly Cys Thr Gly Gly Cys Ala
 2030 2035 2040

Cys Ala Gly Ala Gly Cys Thr Gly Ala
 2045 2050

<210> 8
 <211> 461
 <212> PRT
 <213> Homo sapiens

<400> 8

Met Thr Leu Pro Gly Gly Pro Thr Gly Met Ala Arg Pro Gly Gly Ala
 1 5 10 15

Arg Pro Cys Ser Pro Gly Leu Glu Arg Ala Pro Arg Arg Ser Val Gly
 20 25 30

Glu Leu Arg Leu Leu Phe Glu Ala Arg Cys Ala Ala Val Ala Ala Ala
 35 40 45

Ala Ala Ala Gly Glu Pro Arg Ala Arg Gly Ala Lys Arg Arg Gly Gly
 50 55 60

Gln Val Pro Asn Gly Leu Pro Arg Ala Pro Pro Ala Pro Val Ile Pro
 65 70 75 80

Gln Leu Thr Val Thr Ala Glu Glu Pro Asp Val Pro Pro Thr Ser Pro
 85 90 95

Gly Pro Pro Glu Arg Glu Arg Asp Cys Leu Pro Ala Ala Gly Ser Ser
 100 105 110

His Leu Gln Gln Pro Arg Arg Leu Ser Thr Ser Ser Val Ser Ser Thr
 115 120 125

Gly Ser Ser Ser Leu Leu Glu Asp Ser Glu Asp Asp Leu Leu Ser Asp
 130 135 140

Ser Glu Ser Arg Ser Arg Gly Asn Val Gln Leu Glu Ala Gly Glu Asp
 145 150 155 160

Val Gly Gln Lys Asn His Trp Gln Lys Ile Arg Thr Met Val Asn Leu
 Page 31

EX05-004patentin.txt
170

165

175

Pro Val Ile Ser₁₈₀ Pro Phe Lys Lys Arg₁₈₅ Tyr Ala Trp Val Gln₁₉₀ Leu Ala
 Gly His Thr₁₉₅ Gly Ser Phe Lys Ala₂₀₀ Ala Gly Thr Ser Gly₂₀₅ Leu Ile Leu
 Lys Arg₂₁₀ Cys Ser Glu Pro Glu₂₁₅ Arg Tyr Cys Leu Ala₂₂₀ Arg Leu Met Ala
 Asp₂₂₅ Ala Leu Arg Gly Cys₂₃₀ Val Pro Ala Phe His₂₃₅ Gly Val Val Glu Arg₂₄₀
 Asp Gly Glu Ser Tyr₂₄₅ Leu Gln Leu Gln Asp₂₅₀ Leu Leu Asp Gly Phe₂₅₅ Asp
 Gly Pro Cys Val₂₆₀ Leu Asp Cys Lys Met₂₆₅ Gly Val Arg Thr Tyr₂₇₀ Leu Glu
 Glu Glu Leu₂₇₅ Thr Lys Ala Arg Glu₂₈₀ Arg Pro Lys Leu Arg₂₈₅ Lys Asp Met
 Tyr Lys Lys Met Leu Ala Val₂₉₅ Asp Pro Glu Ala Pro Thr Glu Glu Glu
 His₃₀₅ Ala Gln Arg Ala Val₃₁₀ Thr Lys Pro Arg Tyr₃₁₅ Met Gln Trp Arg Glu₃₂₀
 Gly Ile ser ser Ser₃₂₅ Thr Thr Leu Gly Phe Arg Ile Glu Gly Ile₃₃₅ Lys
 Lys Ala Asp Gly₃₄₀ ser Cys Ser Thr Asp₃₄₅ Phe Lys Thr Thr Arg₃₅₀ Ser Arg
 Glu Gln Val₃₅₅ Leu Arg Val Phe Glu Glu Phe Val Gln Gly₃₆₅ Asp Glu Glu
 Val Leu Arg Arg Tyr Leu Asn₃₇₅ Arg Leu Gln Gln Ile₃₈₀ Arg Asp Thr Leu
 Glu Val Ser Glu Phe Phe₃₉₀ Arg Arg His Glu Val₃₉₅ Ile Gly Ser Ser Leu₄₀₀
 Leu Phe Val His Asp₄₀₅ His Cys His Arg Ala₄₁₀ Gly Val Trp Leu Ile₄₁₅ Asp
 Phe Gly Lys Thr₄₂₀ Thr Pro Leu Pro Asp₄₂₅ Gly Gln Ile Leu Asp₄₃₀ His Arg
 Arg Pro Trp Glu Glu Gly Asn Arg Glu Asp Gly Tyr Leu Leu Gly Leu

EX05-004patentin.txt
440 445

435

Asp Asn Leu Ile Gly Ile Leu Ala Ser Leu Ala Glu Arg
450 455 460

<210> 9
<211> 946
<212> PRT
<213> Homo sapiens

<400> 9

Met Ala Val Tyr Cys Tyr Ala Leu Asn Ser Leu Val Ile Met Asn Ser
1 5 10 15

Ala Asn Glu Met Lys Ser Gly Gly Gly Pro Gly Pro Ser Gly Ser Glu
20 25 30

Thr Pro Pro Pro Pro Arg Arg Ala Val Leu Ser Pro Gly Ser Val Phe
35 40 45

Ser Pro Gly Arg Gly Ala Ser Phe Leu Phe Pro Pro Ala Glu Ser Leu
50 55 60

Ser Pro Glu Glu Pro Arg Ser Pro Gly Gly Trp Arg Ser Gly Arg Arg
65 70 75 80

Arg Leu Asn Ser Ser Ser Gly Ser Gly Ser Gly Ser Ser Gly Ser Ser
85 90 95

Val Ser Ser Pro Ser Trp Ala Gly Arg Leu Arg Gly Asp Arg Gln Gln
100 105 110

Val Val Ala Ala Gly Thr Leu Ser Pro Pro Gly Pro Glu Glu Ala Lys
115 120 125

Arg Lys Leu Arg Ile Leu Gln Arg Glu Leu Gln Asn Val Gln Val Asn
130 135 140

Gln Lys Val Gly Met Phe Glu Ala His Ile Gln Ala Gln Ser Ser Ala
145 150 155 160

Ile Gln Ala Pro Arg Ser Pro Arg Leu Gly Arg Ala Arg Ser Pro Ser
165 170 175

Pro Cys Pro Phe Arg Ser Ser Ser Gln Pro Pro Gly Arg Val Leu Val
180 185 190

Gln Gly Ala Arg Ser Glu Glu Arg Arg Thr Lys Ser Trp Gly Glu Gln
195 200 205

Cys Pro Glu Thr Ser Gly Thr Asp Ser Gly Arg Lys Gly Gly Pro Ser
210 215 220

EX05-004patentin.txt

Leu Cys Ser Ser Gln Val Lys Lys Gly Met Pro Pro Leu Pro Gly Arg
 225 230 235 240
 Ala Ala Pro Thr Gly Ser Glu Ala Gln Gly Pro Ser Ala Phe Val Arg
 245 250 255
 Met Glu Lys Gly Ile Pro Ala Ser Pro Arg Cys Gly Ser Pro Thr Ala
 260 265 270
 Met Glu Ile Asp Lys Arg Gly Ser Pro Thr Pro Gly Thr Arg Ser Cys
 275 280 285
 Leu Ala Pro Ser Leu Gly Leu Phe Gly Ala Ser Leu Thr Met Ala Thr
 290 295 300
 Glu Val Ala Ala Arg Val Thr Ser Thr Gly Pro His Arg Pro Gln Asp
 305 310 315 320
 Leu Ala Leu Thr Glu Pro Ser Gly Arg Ala Arg Glu Leu Glu Asp Leu
 325 330 335
 Gln Pro Pro Glu Ala Leu Val Glu Arg Gln Gly Gln Phe Leu Gly Ser
 340 345 350
 Glu Thr Ser Pro Ala Pro Glu Arg Gly Gly Pro Arg Asp Gly Glu Pro
 355 360 365
 Pro Gly Lys Met Gly Lys Gly Tyr Leu Pro Cys Gly Met Pro Gly Ser
 370 375 380
 Gly Glu Pro Glu Val Gly Lys Arg Pro Glu Glu Thr Thr Val Ser Val
 385 390 395 400
 Gln Ser Ala Glu Ser Ser Asp Ser Leu Ser Trp Ser Arg Leu Pro Arg
 405 410 415
 Ala Leu Ala Ser Val Gly Pro Glu Glu Ala Arg Ser Gly Ala Pro Val
 420 425 430
 Gly Gly Gly Arg Trp Gln Leu Ser Asp Arg Val Glu Gly Gly Ser Pro
 435 440 445
 Thr Leu Gly Leu Leu Gly Gly Ser Pro Ser Ala Gln Pro Gly Thr Gly
 450 455 460
 Asn Val Glu Ala Gly Ile Pro Ser Gly Arg Met Leu Glu Pro Leu Pro
 465 470 475 480
 Cys Trp Asp Ala Ala Lys Asp Leu Lys Glu Pro Gln Cys Pro Pro Gly
 485 490 495

EX05-004patentin.txt

Asp Arg Val Gly Val Gln Pro Gly Asn Ser Arg Val Trp Gln Gly Thr
 500 505 510
 Met Glu Lys Ala Gly Leu Ala Trp Thr Arg Gly Thr Gly Val Gln Ser
 515 520 525
 Glu Gly Thr Trp Glu Ser Gln Arg Gln Asp Ser Asp Ala Leu Pro Ser
 530 535 540
 Pro Glu Leu Leu Pro Gln Asp Gln Asp Lys Pro Phe Leu Arg Lys Ala
 545 550 555 560
 Cys Ser Pro Ser Asn Ile Pro Ala Val Ile Ile Thr Asp Met Gly Thr
 565 570 575
 Gln Glu Asp Gly Ala Leu Glu Glu Thr Gln Gly Ser Pro Arg Gly Asn
 580 585 590
 Leu Pro Leu Arg Lys Leu Ser Ser Ser Ala Ser Ser Thr Gly Phe
 595 600 605
 Ser Ser Ser Tyr Glu Asp Ser Glu Glu Asp Ile Ser Ser Asp Pro Glu
 610 615 620
 Arg Thr Leu Asp Pro Asn Ser Ala Phe Leu His Thr Leu Asp Gln Gln
 625 630 635 640
 Lys Pro Arg Val Ser Lys Ser Trp Arg Lys Ile Lys Asn Met Val His
 645 650 655
 Trp Ser Pro Phe Val Met Ser Phe Lys Lys Lys Tyr Pro Trp Ile Gln
 660 665 670
 Leu Ala Gly His Ala Gly Ser Phe Lys Ala Ala Ala Asn Gly Arg Ile
 675 680 685
 Leu Lys Lys His Cys Glu Ser Glu Gln Arg Cys Leu Asp Arg Leu Met
 690 695 700
 Val Asp Val Leu Arg Pro Phe Val Pro Ala Tyr His Gly Asp Val Val
 705 710 715 720
 Lys Asp Gly Glu Arg Tyr Asn Gln Met Asp Asp Leu Leu Ala Asp Phe
 725 730 735
 Asp Ser Pro Cys Val Met Asp Cys Lys Met Gly Ile Arg Thr Tyr Leu
 740 745 750
 Glu Glu Glu Leu Thr Lys Ala Arg Lys Lys Pro Ser Leu Arg Lys Asp
 755 760 765

EX05-004patentin.txt

Met Tyr Gln Lys Met Ile Glu Val Asp Pro Glu Ala Pro Thr Glu Glu
 770 775 780

Glu Lys Ala Gln Arg Ala Val Thr Lys Pro Arg Tyr Met Gln Trp Arg
 785 790 795 800

Glu Thr Ile Ser Ser Thr Ala Thr Leu Gly Phe Arg Ile Glu Gly Ile
 805 810 815

Lys Lys Glu Asp Gly Thr Val Asn Arg Asp Phe Lys Lys Thr Lys Thr
 820 825 830

Arg Glu Gln Val Thr Glu Ala Phe Arg Glu Phe Thr Lys Gly Asn His
 835 840 845

Asn Ile Leu Ile Ala Tyr Arg Asp Arg Leu Lys Ala Ile Arg Thr Thr
 850 855 860

Leu Glu Val Ser Pro Phe Phe Lys Cys His Glu Val Ile Gly Ser Ser
 865 870 875 880

Leu Leu Phe Ile His Asp Lys Lys Glu Gln Ala Lys Val Trp Met Ile
 885 890 895

Asp Phe Gly Lys Thr Thr Pro Leu Pro Glu Gly Gln Thr Leu Gln His
 900 905 910

Asp Val Pro Trp Gln Glu Gly Asn Arg Glu Asp Gly Tyr Leu Ser Gly
 915 920 925

Leu Asn Asn Leu Val Asp Ile Leu Thr Glu Met Ser Gln Asp Ala Pro
 930 935 940

Leu Ala
 945

<210> 10
 <211> 683
 <212> PRT
 <213> Homo sapiens

<400> 10

Met Arg Arg Cys Pro Cys Arg Gly Ser Leu Asn Glu Ala Glu Ala Gly
 1 5 10 15

Ala Leu Pro Ala Ala Ala Arg Met Gly Leu Glu Ala Pro Arg Gly Gly
 20 25 30

Arg Arg Arg Gln Pro Gly Gln Gln Arg Pro Gly Pro Gly Ala Gly Ala
 35 40 45

EX05-004patentin.txt

Pro Ala Gly Arg Pro Glu Gly Gly Gly Pro Trp Ala Arg Thr Glu Gly
 50 55 60

Ser Ser Leu His Ser Glu Pro Glu Arg Ala Gly Leu Gly Pro Ala Pro
 65 70 75 80

Gly Thr Glu Ser Pro Gln Ala Glu Phe Trp Thr Asp Gly Gln Thr Glu
 85 90 95

Pro Ala Ala Ala Gly Leu Gly Val Glu Thr Glu Arg Pro Lys Gln Lys
 100 105 110

Thr Glu Pro Asp Arg Ser Ser Leu Arg Thr His Leu Glu Trp Ser Trp
 115 120 125

Ser Glu Leu Glu Thr Thr Cys Leu Trp Thr Glu Thr Gly Thr Asp Gly
 130 135 140

Leu Trp Thr Asp Pro His Arg Ser Asp Leu Gln Phe Gln Pro Glu Glu
 145 150 155 160

Ala Ser Pro Trp Thr Gln Pro Gly Val His Gly Pro Trp Thr Glu Leu
 165 170 175

Glu Thr His Gly Ser Gln Thr Gln Pro Glu Arg Val Lys Ser Trp Ala
 180 185 190

Asp Asn Leu Trp Thr His Gln Asn Ser Ser Ser Leu Gln Thr His Pro
 195 200 205

Glu Gly Ala Cys Pro Ser Lys Glu Pro Ser Ala Asp Gly Ser Trp Lys
 210 215 220

Glu Leu Tyr Thr Asp Gly Ser Arg Thr Gln Gln Asp Ile Glu Gly Pro
 225 230 235 240

Trp Thr Glu Pro Tyr Thr Asp Gly Ser Gln Lys Lys Gln Asp Thr Glu
 245 250 255

Ala Ala Arg Lys Gln Pro Gly Thr Gly Gly Phe Gln Ile Gln Gln Asp
 260 265 270

Thr Asp Gly Ser Trp Thr Gln Pro Ser Thr Asp Gly Ser Gln Thr Ala
 275 280 285

Pro Gly Thr Asp Cys Leu Leu Gly Glu Pro Glu Asp Gly Pro Leu Glu
 290 295 300

Glu Pro Glu Pro Gly Glu Leu Leu Thr His Leu Tyr Ser His Leu Lys
 305 310 315 320

EX05-004patentin.txt

Cys Ser Pro Leu Cys Pro Val Pro Arg Leu Ile Ile Thr Pro Glu Thr
 325 330 335
 Pro Glu Pro Glu Ala Gln Pro Val Gly Pro Pro Ser Arg Val Glu Gly
 340 345 350
 Gly Ser Gly Gly Phe Ser Ser Ala Ser Ser Phe Asp Glu Ser Glu Asp
 355 360 365
 Asp Val Val Ala Gly Gly Gly Gly Ala Ser Asp Pro Glu Asp Arg Ser
 370 375 380
 Gly Ser Lys Pro Trp Lys Lys Leu Lys Thr Val Leu Lys Tyr Ser Pro
 385 390 395 400
 Phe Val Val Ser Phe Arg Lys His Tyr Pro Trp Val Gln Leu Ser Gly
 405 410 415
 His Ala Gly Asn Phe Gln Ala Gly Glu Asp Gly Arg Ile Leu Lys Arg
 420 425 430
 Phe Cys Gln Cys Glu Gln Arg Ser Leu Glu Gln Leu Met Lys Asp Pro
 435 440 445
 Leu Arg Pro Phe Val Pro Ala Tyr Tyr Gly Met Val Leu Gln Asp Gly
 450 455 460
 Gln Thr Phe Asn Gln Met Glu Asp Leu Leu Ala Asp Phe Glu Gly Pro
 465 470 475 480
 Ser Ile Met Asp Cys Lys Met Gly Ser Arg Thr Tyr Leu Glu Glu Glu
 485 490 495
 Leu Val Lys Ala Arg Glu Arg Pro Arg Pro Arg Lys Asp Met Tyr Glu
 500 505 510
 Lys Met Val Ala Val Asp Pro Gly Ala Pro Thr Pro Glu Glu His Ala
 515 520 525
 Gln Gly Ala Val Thr Lys Pro Arg Tyr Met Gln Trp Arg Glu Thr Met
 530 535 540
 Ser Ser Thr Ser Thr Leu Gly Phe Arg Ile Glu Gly Ile Lys Lys Ala
 545 550 555 560
 Asp Gly Thr Cys Asn Thr Asn Phe Lys Lys Thr Gln Ala Leu Glu Gln
 565 570 575
 Val Thr Lys Val Leu Glu Asp Phe Val Asp Gly Asp His Val Ile Leu
 580 585 590

EX05-004patentin.txt

Gln Lys Tyr Val Ala Cys Leu Glu Glu Leu Arg Glu Ala Leu Glu Ile
595 600 605

Ser Pro Phe Phe Lys Thr His Glu Val Val Gly Ser Ser Leu Leu Phe
610 615 620

Val His Asp His Thr Gly Leu Ala Lys Val Trp Met Ile Asp Phe Gly
625 630 635 640

Lys Thr Val Ala Leu Pro Asp His Gln Thr Leu Ser His Arg Leu Pro
645 650 655

Trp Ala Glu Gly Asn Arg Glu Asp Gly Tyr Leu Trp Gly Leu Asp Asn
660 665 670

Met Ile Cys Leu Leu Gln Gly Leu Ala Gln Ser
675 680